Tumor marker	structure	Site of secretion	Normally elevated in	Pathologically ↑ « cancer	Pathological ↑ « not cancer	Notes.
Oncofoetal antigen						
① CEA	- 200 KDa glycoptn « β globulin » - Normal value « 2.6 ng/ml »	- GIT epithelium during embryonic and early foetal life.	- slightly ↑ in heavy smookers	① Colorectal « 65 - 97% » ② Lung cancer « 60 - 80% » ③ Gastric « « 45 - 60% » ④ Pancreatic « 70 - 80% » ⑤ Breast « « 45 - 60% »	- Breast tumor - inflam bowel disease - ulcer and Colitis - Benign rectal Polyps - pancreatitis - Alcoholic liver disease hepatitis - cirrhosis.	- It is mainly usefull for monitoring and detecting recurrency of colorectal cancer. - Not detected in normal person after birth.
② AFP	- glycoptn « albumin with molicular wieght = 69 KDa. - N.V = « < 20 ng/dl »	- found in foetal blood secreted by: - Yolk sac - Non-differentiated liver - foetal GIT	Pregnancy.	- hepatic cancer 90% - Gastric cancer 18% - Colonic cancer 05%	- Viral hepatitis - cirrhosis - billiary «. - Pancreatitis.	- disappear from blood after 6 months. - used for SCREENing in high prevalence areas with chronic active hepatitis, cirrhosis, +ve Hbs Ag and HCV. - Most establish T.M in HCC.
Coft antigins:						
① CA 15-3 « Breast »	- high molecular weight « 400 KDa » - Glycoptn. - N.V « 0 - 30 U/ml »		- Pregnant « up to 40% » - some normal people « 1 - 3% »	- 70 - 80% metiastasis breast cancer. -	- Benign breast tumor 3% - 9%	- Not used for diagnosis of primary breast cancer. - Never used in screening. - useful for detecting breast c in late stages and monitoring therapy prognosis
② CA 125	- mucin like molecule - Glycoptn. - high molecular weight « > 200 KDa » - N.V = « up to 35 U/ml »	- mesothelia cells of Peritoneum and other tissues with mullirian origin.	Not found in normal ovary - 1st trimester of pregnancy - Follicular phase of cycle - functional ovary cyst. - ovarian fibroma. - Normal person « 0 - 6 - 1.4 »	- epithelial ovarian Cancer « 80% » - Fallobian tube tumor. - squamos vaginal carcinoma - Colorectal cancer - lung cancer - Lymphoma - Breast cancer.	- Benin ovarian neoplasm. - Cirrhosis. - Acute inflammatory disease e.g « Pancreatitis - Peritonitis ».	
Glycolipid						
③ CA 19-9	- ~~Glycoptn~~ with high molecular weight « > 2000 » - N.V = « < 37 U/ml »	- Pancreatic & billiary ductlar cells. - Gastric and saliuary Glands.		- Pancreatic Cancer. - Gastric « - hepatobilliary « - colorectal « -	Acute Pancreatitis	usfull in Pancreatic cancer.
④ PSA.	- Single chain Glycoprotein - Molecular weight « 34 » - N.V = « < 4 ng/ml »	- epithelium of Prostate	- Digital rectal examination « DRE » - Endoscopy - Prostatic biopsy - urinary cattitrization - urinary retention « UTI » - Prolong cycling.	- Prostatic cancer	- Prostitis - Prostatic hypertrophy.	- Neutral Protease « 240 a.a » - Found in seminal fluid - There are 3 forms found in serum - used for detection of prostate Cancer.

CamScanner الممسوحة ضوئيا بـ